LIST OF CONTENTS

Number 1

	i	Editorial Announcement
A. Kitron, T. Elperin and **A. Tamir**	1	Monte Carlo simulation of gas–solids suspension flows in impinging streams reactors
A. Berlemont, P. Desjonqueres and **G. Gouesbet**	19	Particle Lagrangian simulation in turbulent flows
D. D. Joseph, T. S. Lundgren, R. Jackson and **D. A. Saville**	35	Ensemble averaged and mixture theory equations for incompressible fluid–particle suspensions
S. Ni, B. T. Chao and **S. L. Soo**	43	Particle diffusivity in fully developed, turbulent, horizontal pipe flow of dilute air–solid suspensions
Y. Taitel, S. Vierkandt, O. Shoham and **J. P. Brill**	57	Severe slugging in a riser system: experiments and modeling
Y. Taitel, O. Shoham and **J. P. Brill**	69	Transient two-phase flow in low velocity hilly terrain pipelines
D. Barnea	79	Effect of bubble shape on pressure drop calculations in vertical slug flow
H. Raszillier, F. Durst and **B. Mohr**	91	Effects of charges on the particle motion above fluidized beds
G. G. Chase, M. S. Willis and **J. Kannel**	103	Averaging volume size determination of electro-conductive porosity probes
D. J. Reinemann, J. Y. Parlange and **M. B. Timmons**	113	Theory of small-diameter airlift pumps
Y. L. Wong, D. C. Groeneveld and **S. C. Cheng**	123	CHF prediction for horizontal tubes
N. S. Liao and **C. C. Wang**	139	Transient response characteristics of two-phase condensing flows
E. Gavze	153	The accelerated motion of rigid bodies in non-steady Stokes flow
	167	Book Reviews
	I	Announcements

Number 2

J. M. Ham, S. Thomas, E. Guazzelli, G. M. Homsy and **M.-C. Anselmet**	171	An experimental study of the stability of liquid-fluidized beds
B. E. Kreischer, H. Moritomi and **L.-S. Fan**	187	Wake solids holdup characteristics behind a single bubble in a three-dimensional liquid–solid fluidized bed
A. Lodes and **O. Mierka**	201	The velocity field in a vertical gas–solid suspension flow
A. Biesheuvel and **W. C. M. Gorissen**	211	Void fraction disturbances in a uniform bubbly fluid
Z. Ruder and **T. J. Hanratty**	233	A definition of gas–liquid plug flow in horizontal pipes
K. S. Rezkallah	243	A comparison of existing flow-pattern predictions during forced-convective two-phase flow under microgravity conditions
N. N. Clark, J. W. Van Egmond and **E. P. Nebiolo**	261	The drift–flux model applied to bubble columns and low velocity flows
J. Nahstoll	281	Annular flow at high evaporation rates
C. Kleinstreuer and **T.-Y. Wang**	295	Approximate analysis of interacting vaporizing fuel droplets
M. Shapira and **S. Haber**	305	Low Reynolds number motion of a droplet in shear flow including wall effects
G. Ahmadi and **D. Ma**	323	A thermodynamical formulation for dispersed multi-phase turbulent flows—I. Basic theory
D. Ma and **G. Ahmadi**	341	A thermodynamical formulation for dispersed multi-phase turbulent flows—II. Simple shear flows for dense mixtures
Brief Communication		
M. J. Tan and **M. Ishii**	353	A method for measurement of local specific inter-facial area
Letter to the Editor		
R. A. Gore and **C. T. Crowe**	359	Discussion of "Particle drag in a dilute turbulent two-phase suspension flow"
	I	Announcements

Number 3

S. A. Schadel, G. W. Leman, J. L. Binder and **T. J. Hanratty**	363	Rates of atomization and deposition in vertical annular flow
V. C. Kelessidis and **A. E. Dukler**	375	Motion of large gas bubbles through liquids in vertical concentric and eccentric annuli
M. Deichsel and **E. R. F. Winter**	391	Adiabatic two-phase pipe flow of air–water mixtures under critical flow conditions
L. P. Wang, V. P. Carey, R. Greif and **D. Abdollahian**	407	Experimental simulation and analytical modeling of two-phase flow under zero-gravity conditions
Y. Lee, Y. Zeng and **T. Shigechi**	421	Conjugated heat transfer of nucleate pool boiling on a horizontal tube
G. E. McCreery and **S. Banerjee**	429	Phase separation of dispersed mist and dispersed annular (rivulet or thin film) flow in a tee—I. Experiments
G. H. Ganser and **D. A. Drew**	447	Nonlinear stability analysis of a uniformly fluidized bed
A. Tapucu, A. Teyssedou, M. Geçkinli and **M. Merilo**	461	Axial pressure distribution in two laterally interconnected channels with blockages
G. S. Arnold, D. A. Drew and **R. T. Lahey Jr**	481	An assessment of multiphase flow models using the second law of thermodynamics
N. Apazidis	495	Temperature distribution and heat transfer in a particle–fluid flow past a heated horizontal plate
H. J. Keh and **S. H. Chen**	515	The axisymmetric thermocapillary motion of two fluid droplets
E. Gavze	529	A boundary integral equation solution of the Stokes flow due to the motion of an arbitrary body near a plane wall with a hole
J. F. T. Pittman and **J. Bayram**	545	Extensional flow of polydisperse fibre suspensions in free-falling liquid jets

Number 4

MASON MEMORIAL ISSUE

T. G. M. van de Ven	561	S. G. Mason—a retrospective
U. Schaflinger, A. Acrivos and **K. Zhang**	567	Viscous resuspension of a sediment within a laminar and stratified flow

H. Brenner, A. L. Graham, J. R. Abbott and **L. A. Mondy** 579 Theoretical basis for falling-ball rheometry in suspensions of neutrally buoyant spheres

S.-M. Yang and **L. G. Leal** 597 Motions of a fluid drop near a deformable interface

R. G. Cox 617 Instability of sedimenting bidisperse suspensions

B. J. Yoon and **S. Kim** 639 A boundary collocation method for the motion of two spheroids in Stokes flow: hydrodynamic and colloidal interactions

L. A. Mondy, T. G. Morrison, A. L. Graham and **R. L. Powell** 651 Measurements of the viscosities of suspensions of oriented rods using falling ball rheometry

M. C. Fair and **J. L. Anderson** 663 Electrophoresis of dumbbell-like colloidal particles

R. H. Ottewill and **A. R. Rennie** 681 Scattering studies on polymer colloids under shear

P. M. Adler, C. G. Jacquin and **J. A. Quiblier** 691 Flow in simulated porous media

J. Petlicki and **T. G. M. van de Ven** 713 Particle trajectories near freely rotating spheroids in simple shear flow

S. G. Bike and **D. C. Prieve** 727 Measurements of double-layer repulsion for slightly overlapping counterion clouds

I Announcements

Number 5

V. E. Nakoryakov, V. V. Kuznetsov, V. E. Dontsov and **P. G. Markov** 741 Pressure waves of moderate intensity in liquid with gas bubbles

B. C. R. Ewan and **K. Moodie** 751 Evaluation of a numerical critical pipe flow model with wall nucleation

A. Serizawa, T. Ida, O. Takahashi and **I. Michiyoshi** 761 MHD effect on NaK–nitrogen two-phase flow and heat transfer in a vertical round tube

J. Barták 789 A study of the rapid depressurization of hot water and the dynamics of vapour bubble generation in superheated water

M. R. Davis and **B. Fungtamasan** 799 Two-phase flow through pipe branch junctions

C. B. Rogers and **J. K. Eaton** — 819 The behavior of solid particles in a vertical turbulent boundary layer in air

T. D. Karapantsios and **A. J. Karabelas** — 835 Surface characteristics of roll waves on free falling films

Y. L. Tsay, T. F. Lin and **W. M. Yan** — 853 Cooling of a falling liquid film through interfacial heat and mass transfer

C. P. Tso and **S. Sugawara** — 867 Film thickness prediction in a horizontal annular two-phase flow

B. Yavari and **A. Bedford** — 885 The Biot drag and virtual mass coefficients for face centered cubic granular materials

P. Cherukat and **J. B. McLaughlin** — 899 Wall-induced lift on a sphere

H. A. Nasr-El-Din, J. H. Masliyah and **K. Nandakumar** — 909 Continuous gravity separation of concentrated bidisperse suspensions in an inclined plate settler

Brief Communications

M. R. Davis — 921 Wall friction for two-phase bubbly flow in rough and smooth tubes

D. Albagli and **Y. Levy** — 929 Two-phase flow measurements in confined coaxial jets

933 Book Review

Number 6

M. Rashidi, G. Hetsroni and **S. Banerjee** — 935 Particle–turbulence interaction in a boundary layer

G. F. Hewitt, S. Jayanti and **C. B. Hope** — 951 Structure of thin liquid films in gas–liquid horizontal flow

K. M. Becker, J. Engström, O. Nylund, B. Schölin and **B. Söderquist** — 959 Analysis of the dryout incident in the Oskarshamn 2 boiling water reactor

P. Deligiannis and **J. W. Cleaver** — 975 The role of nucleation in the initial phases of a rapid depressurization of a subcooled liquid

V. X. Tung and **V. K. Dhir** — 985 Finite element solution of multi-dimensional two-phase flow through porous media with arbitrary heating conditions

G. C. Gardner — 1003 Deep swirling flow down a plughole with air entrainment

Y. Yan and **R. B. Thorpe** 1023 Flow regime transitions due to cavitation in the flow through an orifice

D. R. Chenoweth and **S. Paolucci** 1047 Compressible flow of a two-phase fluid between finite vessels—I. Ideal carrier gas

G. D. Mandrusiak and **V. P. Carey** 1071 A finite difference computational model of annular film-flow boiling and two-phase flow in vertical channels with offset strip fins

S. Jayanti, G. F. Hewitt and **S. P. White** 1097 Time-dependent behaviour of the liquid film in horizontal annular flow

G. Sæther, K. Bendiksen, J. Müller and **E. Frøland** 1117 The fractal statistics of liquid slug lengths

Brief Communication

D. A. Drew and **R. T. Lahey Jr** 1127 Some supplemental analysis concerning the virtual mass and lift force on a sphere in a rotating and straining flow

1131 Corrigenda

I Announcements